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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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08/994,642 12/19/97 YANAI

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005514 WM02/0117
FITZPATRICK CELLA HARPER & SCINTO
30 ROCKEFELLER PLAZA
NEW YORK NY 10112

EXAMINER

TILLERY, R	
ART UNIT	PAPER NUMBER

2612
DATE MAILED:

01/17/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

08/994,642

Applicant(s)

YANAI ET AL.

Examiner

RASHAWN N TILLERY

Art Unit

2712

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 November 2000.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1,2,4,6,8,10,12,14,16,18,20,22,24,26,28,30,32 and 34 is/are allowed.
- 6) ☒ Claim(s) 3,5,7,9,11,13,15,17,19,21,23,25,27,29,31,33,35 and 36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. & 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 18) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other:

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EXAMINER'S AMENDMENT
Response

Applicant's arguments with respect to claim 3 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

1. Claims 3, 5, 11, 13, 19, 21, 27, 29, 35 ~~and 36~~ are rejected under 35

U.S.C. 102(e) as being anticipated by Udagawa et al (US5880781).

Regarding claim 3, Udagawa discloses an image pickup device comprising a color filter array (see figure 1), plural pixels (see figure 6, PD), a plurality of vertical read-out units (see figure 6, V-CCD), a horizontal read-out unit (see figure 6, H-CCD), an output unit (see figure 6, Output Amplifier) and control means (see figures 2A-D where a plurality of first lines (C1 and M1) and a plurality of second lines (Y2 and G2) are shown; also, see where the plurality of second lines are thinned-out) for dividing the plural pixels on the unit basis of predetermined number of lines which include a plurality of first lines and a plurality of second lines, and thinning out the signals of the pixels of

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the plurality of second lines (Examiner acknowledges that the limitations of this amended claim, 3, was written in the alternative; and thus, notes that the portion of the limitation pertaining to "thinning-out" has been met).

Regarding claim 5, Udagawa discloses the signal charges of two predetermined pixels being added and an image signal corresponding to the added signal charges being outputted from the output unit (see col. 5, lines 36-42).

Regarding claims 11 and 13, Udagawa discloses the combination of two predetermined pixels of yellow and green and cyan and magenta (see figures 13A-D).

Regarding claims 19, 21, 27 and 29 Udagawa discloses electrodes connected to every fourth pixel in a vertical direction (see figure 2A where a four-phase driver to control the read-out of signal charges from the pixels to the vertical charge units is shown).

Regarding claim 35, Udagawa discloses an image pickup device where the control means effects the control of the pixels so as to generate alternately different kinds of color difference signals on the predetermined number of lines basis (see col. 5, lines 59-65 where the color difference signals are discussed).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 7, 9, 15, 17, 23, 25, 31 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Udagawa in view of Tanaka et al.

Regarding claim 7, Udagawa does not explicitly disclose taking added signal charges and further adding them with signal charges in the diagonal direction. Tanaka reveals that it is well known to add signal charges in the diagonal direction (see figure 5). Therefore, it would have been obvious to one of ordinary skill in the art to utilize Tanaka's teachings. One would have been motivated to do so in effort to obtain a more accurate picture and thus, produce a high quality image.

Regarding claim 9, Udagawa does not explicitly disclose combining a method of adding signal charges in the vertical direction and further adding them with signal charges in the diagonal direction and further adding signal charges in the vertical direction. Tanaka reveals that it is well known to combine added charges in the vertical and diagonal directions and further add charges in the vertical direction (see Fig. 1 where the added combinations of, "(Mg + Ye)," in the vertical direction and, "(G + Cy)," in the diagonal direction are further added to signal charges in the vertical direction, "(G + Ye)"). Therefore, it would have been obvious to one of ordinary skill in the art to utilize Tanaka's teachings. One would have been motivated to do so in effort to obtain a composite image signal and thus, produce a high quality image.

Regarding claims 15 and 17, see claims 11 and 13 above.

Regarding claims 23, 25, 31 and 33 Udagawa discloses electrodes connected to every fourth pixel in a vertical direction (see figure 2A where a four-phase driver to

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control the read-out of signal charges from the pixels to the vertical charge units is shown).

2. Claim 36 is rejected under 35 U.S.C. 103(a) as being unpatentable over Udagawa.

Regarding claim 36, Udagawa does not explicitly disclose a signal processing circuit which subjects the signals output from the output unit to an image processing and an image display unit. However, it would have been obvious to one of ordinary skill in the art to implement a processing and display unit in effort to view pictures and thus, produce high quality images.

3. Claims 1, 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32 and 34 are allowed.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

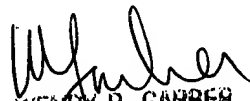
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Any inquiry concerning this communication or earlier communications from the examiner should be directed to RASHAWN N TILLERY whose telephone number is 703-305-0627. The examiner can normally be reached on M-F 8-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, WENDY GARBER can be reached on 703-305-4929. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-5359 for regular communications and 703-308-5359 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4700.

RNT
January 12, 2001


WENDY R. GARBER
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600